

2
CLAIM AMENDMENTS

Claims 1-11 (Cancelled)

12. (Withdrawn-Currently Amended) The method according to claim 8 15 further comprising providing a T-section, in the form of a T in plan view, extending over the structure welding a leg of the T section on an outer surface of the column at a tip thereof for three-dimensionally reinforcing the building by the alignment of the T-section with interior RC-beams or earthquake resisting walls extending perpendicularly to the external walls and being united to the existing RC-columns to be reinforced by the wide flange section columns.

13. (Withdrawn) The method according to claim 12, wherein; said T-section projects outside said structure as wide as a verandah of each story thereof.

14. (Withdrawn) The method according to claim 13, further comprising placing additional beams made of high strength fluidized concrete or cement mortar on both sides of said interior RC-beams or RC-beams over the existing earthquake resisting walls for obtaining a desirable bending moment based on post-tension generated by unbonded prestressed steel bars buried in the additional beams for attaining strength in a horizontal direction of said beams.

15. (New) A method for reinforcing an existing reinforced concrete building structure to improve resistance to seismic forces, the existing reinforced concrete building structure made from reinforced concrete columns and reinforced concrete beams and having window openings, the method comprising:

providing a steel frame for stiffening the existing reinforced concrete building

structure;

making the steel frame by assembling steel columns and steel beams made from H-shape steel having a web between two wide flange sections, the H-shaped steel selected to have a bending rigidity roughly equivalent to that of an existing reinforced concrete column;

locating the steel frame on the outside of the building structure without placing any braces in front of the window openings, placing the wide flange steel columns in parallel to the existing reinforced concrete columns and placing the wide flange steel beams in parallel to the existing reinforced concrete beams located within or being part of exterior walls of the building structure, locating the webs of the H shaped steel in proximity to and in a facing relation relative to the existing reinforced concrete columns and beams,

fixing the wide flange steel columns and wide flange steel beams to the existing reinforced concrete columns and beams, connecting the steel frame to the reinforced concrete columns and reinforced concrete beams such that stress occurring at a connection between the existing reinforced concrete column and the wide flange steel column is reduced by the deformation of the wide flange section in a manner similar to the existing reinforced concrete column when subjected to a horizontal load transmitted from the existing reinforced concrete beam and/or wide flange steel beam during an earthquake, strength increased in a horizontal direction by a combination of the reinforced concrete column and the wide flange steel column by decreasing the deformation of the reinforced concrete column after yielding so as to equalize the range of quasi-elastic deformation of the combination to that of elastic deformation of the wide flange steel column.

16. (New) The method according to claim 15 wherein the H shaped steel is produced by welding.

17. (New) The method according to claim 17 further comprising producing the H shaped steel by welding the web in an inward position so that the web is closer to the reinforced concrete structure.

18. (New) The method according to claim 15 further comprising fixing tie hoops on an outward facing surface of the web.

19.(New) The method according to claim 18 further comprising increasing bending rigidity by engaging the tie hoops with vertical bars and placing cement, mortar or concrete into a space accommodating said tie hoops and vertical bars.

20.(New) The method of claim 15 further comprising attaching the wide flange steel columns and wide flange steel beams to the existing reinforced concrete columns and beams using anchors.

21. (New) The method according to claim 15 wherein the wide flange steel columns are made of a steel having a low yield point, reducing yield bending strength without a reduction of bending rigidity, for reducing a response stress thereof during an earthquake through plasticization hastened by yielding the combination of the reinforced concrete column and the wide flange steel column at a bending strength of approximately 2 to 4 times a strength of the existing reinforced concrete column.